

E1

27. (Amended Thrice) A method for making a plurality of different reagent mixtures comprising blood and analyzing particle distributions of the reagent mixtures, wherein each reagent mixture corresponds to a respective operator input indicative of a respective species of blood, and the method is performed with an apparatus having at least one pump, at least one reagent chamber containing at least one lysing agent, a sensing unit defining a counting orifice for receiving a reagent mixture and analyzing a particle distribution of the reagent mixture, and a control unit responsive to each operator input to control the at least one pump to make a respective reagent mixture having a volumetric ratio of the at least one lysing agent to blood corresponding to the respective operator input and species of blood, and to further control the sensing unit to analyze a particle distribution of the reagent mixture, the method comprising the following steps:

adjusting the volumetric ratio of the at least one lysing agent to blood in response to an operator input indicative of a respective species of blood, to correspond to the respective operator input and thereby form a predetermined reagent mixture corresponding to the respective operator input and species of blood, said adjusting including:

selecting at least one lysing agent corresponding to the respective operator input;

pumping with the at least one pump a predetermined volume of the at least one lysing agent corresponding to the respective operator input;

pumping with the at least one pump a predetermined volume of at least one other reagent-mixture component comprising blood and corresponding to the respective operator input;

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intermixing the predetermined volumes of the at least one lysing agent and the at least one other reagent-mixture component comprising blood, and in turn creating the predetermined reagent mixture corresponding to the respective operator input; and introducing the predetermined reagent mixture through the counting orifice of the sensing unit and sensing a particle distribution of said reagent mixture.

E2

35. (Amended Twice) An apparatus for making a plurality of reagent mixtures comprising blood and analyzing particle distributions of the reagent mixtures, comprising:

at least one pump;

at least one reagent chamber coupled in fluid communication with the at least one pump and containing at least one lysing agent;

a sensing unit defining a counting orifice for receiving a reagent mixture and analyzing a particle distribution of the reagent mixture; and

means for adjusting the volumetric ratio of blood to the at least one lysing agent for creating a plurality of different reagent mixtures, each corresponding to a different operator input indicative of a respective species of blood, and for controlling the at least one pump in response to each operator input to pump predetermined volumes of blood and the at least one lysing agent in accordance with the blood/lysing agent ratio corresponding to the respective operator input and species of blood, said means further controlling the at least one pump to

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E2
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(i) intermix the predetermined volumes of blood and the at least one lysing agent and thereby create the reagent mixture corresponding to the respective operator input, and

(ii) introduce the reagent mixture through the counting orifice of the sensing unit for sensing a particle distribution of the reagent mixture.

E3

38. (Amended) An apparatus for making a plurality of reagent mixtures for multi-species hematology testing, and for sensing particle distributions of the mixtures for multi-species hematology analysis, comprising:

at least one reagent chamber for containing at least one lysing agent;

at least one pump coupled in fluid communication with the at least one reagent chamber;

at least one valve coupled in fluid communication with the at least one pump for introducing a blood specimen corresponding to any one of a plurality of species;

a control unit electrically coupled to the at least one pump for adjusting the volumetric ratio of the blood specimen to the at least one lysing agent in correspondence with an operator input corresponding to a respective one of the plurality of species;

a mixing chamber coupled in fluid communication with the at least one pump for receiving the pumped volumes of the respective blood specimen and the at least one lysing agent and creating a reagent mixture therefrom having a blood to lysing agent volumetric ratio corresponding to the operator input and respective species to [, and] thereby [creating] create a plurality of different reagent mixtures having a plurality of blood to lysing agent volumetric ratios corresponding to a plurality of different operator inputs and respective species; and

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